Remarks

The Applicant has amended Claim 6, support for which may be found at least in paragraphs [0038], [0039], and [0067]-[0072] of the originally-filed Specification. No claims have been added or cancelled. Thus, Claims 6-11 remain pending.

Claim 6 stands objected to for not positively reciting an element and for including an indefinite term. Claim 6 is herein amended to correct these informalities, and the Applicant accordingly requests withdrawal of the claim objection.

Claims 6-11 stand rejected under 35 USC §103(a) as being unpatentable over Elie in view of Tal. The Applicant respectfully requests reconsideration and withdrawal of the rejections.

Independent Claim 6 recites a process for organization of a relational database. The process includes "providing a table of hierarchical expansion, the table including at least one column and at least one primary key, wherein each line of the table has a line index." The primary key is a sorted set of columns, with each line being distinct from one another. A thesaurus is created for each column of the table. For each word of each thesaurus, a set of line indices is determined. This set of line indices corresponds to each line index of the line at which the word of the thesaurus appears in the table. For each word, a radix tree is created that is comprised of the determined set of line indices. Claim 6 further recites "storing both a sequence of the primary key values and a permutation on the set of primary key values" for each primary key. Such storage provides for finding a given value in the relational database.

Thus, the relational database organization process of Claim 6 provides the advantageous effect of improving database requests by creating a radix tree for each word of each thesaurus,

which includes the entries of the table, and by additionally storing a sequence of primary key values and a permutation of the primary key values to quickly find a value in the database.

Neither Elie nor Tal teach the process of organizing a relational database as recited in independent Claim 6. Elie is directed to organization of a database in which row identifiers define designated rows of a table whose columns are associated with data attributes. The rows contain "groups of related words assigned to said attributes in a collection of data" (Elie paragraph [0022]). However, while Elie shows a thesaurus organization with a word index for each line of the table (see, for example Figures 25-27 and paragraph [0270] of Elie), Elie does not disclose "at least one primary key" for the table and that the "primary key is a sorted set of columns where each line of the table is distinct," as is recited in Claim 6.

Additionally, Elie discloses a request tree comprised of query criteria. In the tree, "the leaves correspond to ranges for respective attributes values as defined in the SQL query and the nodes correspond to logical operations to be performed between those leaves" (Elie paragraph [0298] and FIG. 37). The request tree may be expanded by thesaurus index files so that leaves of the expansion portion are "encoded by the row-ID's" (Elie paragraph [0305] and FIG. 38). However, the request tree and expanded request tree of Elie are not at all equivalent to the radix tree of Claim 6 in which the radix tree is "comprised of the set of line indices for each word of each of the thesauruses." Elie's request tree, instead of being formed of the line indices for a thesaurus word, includes ranges for attribute values, logical operations, and identifiers for multiple thesaurus entries, as is clearly shown in FIGs. 37 and 38 of Elie. Elie's request tree is thus not at all comprised of the line indices for one (i.e. each) word, as is recited in Claim 6.

The rejection acknowledges, on Page 4 of the Office Action of July 9, 2008, that, while Elie discloses creating a binary tree, Elie does not disclose a radix tree. Tal is turned to for this teaching.

Tal is directed to radix-tree search structures and storing and retrieving data using a radix-search tree. However, the radix tree described by Tal also lacks features of that recited in Claim 6. In particular, in Claim 6 recites the creation of a radix tree "for each word of each of the thesauruses," where each radix tree includes a "set of line indices for each word." However, the radix-search tree disclosed by Tal is not comprised of a "set of line indices for each word" but is instead comprised of leaves that "include entries containing wildcards at the beginning or in the middle of the entry" (see, for example, Tal paragraph [0102]). In Tal, a leaf is used to denote multiple "keys" that represent one or more wildcard bits in a string. In fact, in Tal, line indices are not at all used to define or otherwise indicate each entry or line and thus cannot be used in creating the radix trees. Moreover, a single radix-search tree is used to represent an entire table in Tal, while, in sharp contrast, Claim 6 recites that a radix tree is created "for each word of each of the thesauruses."

The Applicant respectfully submits that the above differences set forth with respect to Elie and Tal are such that the combination of Elie and Tal fails to result a process that contains each and every claimed aspect of the subject matter recited in Claims 6-11. The combination of Elie and Tal does not teach at least the features of "the table including at least one column and at least one primary key, ... and wherein the at least one primary key is a sorted set of columns where each line of the table is distinct" and; "creating a radix tree comprised of the set of line indices for each word of each of the thesauruses." Thus, withdrawal of the §103(a) rejection of Claims 6-11 based on the combination of Elie and Tal is respectfully requested.

In light of the foregoing, the Applicant respectfully submits that Claims 6-11 are now in condition for allowance, which is respectfully requested.

Respectfully submitted,

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